



**SLOVENSKI STANDARD**  
**SIST-TS CLC/TS 50398:2003**  
**01-september-2003**

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**Alarm systems - Combined and integrated alarm systems - General requirements**

Alarm systems - Combined and integrated alarm systems - General requirements

Alarmanlagen - Kombinierte und integrierte Alarmanlagen - Allgemeine Anforderungen

Systemes d'alarme - Systemes d'alarme combinés et intégrés - Règles générales

**Ta slovenski standard je istoveten z: CLC/TS 50398:2002**

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**CLC/TS 50398**

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**Alarm systems -  
Combined and integrated alarm systems -  
General requirements**

This Technical Specification was approved by CENELEC on 2002-06-22.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This Technical Specification was prepared by the Technical Committee CENELEC TC 79, Alarm systems. The text of the draft was submitted to the questionnaire and vote procedure and was approved as CLC/TS 50398 on 2002-06-22.

The following date was fixed:

- latest date by which the existence of the CLC/TS  
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## Introduction

This Technical Specification describes the general requirements and configuration types for combined and integrated alarm systems which shall apply when one or more of the applications being integrated is an alarm application.

The prime considerations of this Technical Specification are to ensure that the individual standards are applied when they form a part of an integrated system solution with each other or with other (specified or unspecified) applications.

This document provides additional information relating to initial system design, planning, installation, commissioning, operation and maintenance for such combined and integrated alarm systems.

## 1 Scope

This Technical Specification specifies the requirements for alarm systems combined and integrated with other systems which may or may not be alarm systems.

This Technical Specification defines requirements, related to the rules of integration, in order to complement the individual alarm application standards and to provide clarification where there is conflict.

Alarm transmission systems are excluded from the scope of this Technical Specification.

## 2 Normative references

EN 54 Series, Fire alarm systems

EN 5013x series, Alarm systems

EN 60073:2002, Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators

## 3 Definitions

For the purposes of this Technical Specification, the following definitions apply:

### 3.1

#### **additional facility**

facility which is not described in an application standard and not necessary to fulfil the functions required of that application standard

NOTE 1 An additional facility may be shared by two or more applications. In this case this facility may be an additional facility for one application but standard-required for another application.

NOTE 2 For an application where no standard exists, any facility of this application is considered as additional.

### 3.2

#### **alarm**

a warning of the presence of a hazard to life, property or the environment

### 3.3

#### **alarm application**

an application intended for the protection of life, property or the environment, such as:

- intrusion and hold-up alarm;
- social alarm;
- closed circuit television used for security and surveillance;
- access control;
- fire detection and fire alarm.

NOTE This list is to be extended, following the scope of CLC/TC 79 and CEN/TC 72.

### 3.4

#### **alarm receiving centre**

a continuously manned centre to which information concerning the status of one or more alarm systems is reported

### 3.5

#### **alarm company**

an organization which provides services for alarm systems

### 3.6

#### **alarm condition**

a condition of an alarm system, or part thereof, which results from the response of the system to the presence of a hazard

### 3.7

#### **alarm system**

an electrical installation which responds to the manual or automatic detection of the presence of a hazard

### 3.8

#### **alarm transmission equipment**

equipment which is used primarily for the transmission of alarms from the alarm system interface at the supervised premises to the annunciation equipment interface at the alarm receiving centre. It may also transmit information or commands from the alarm receiving centre to one or more alarm systems

NOTE This does not include equipment provided by a PTT or other general telecommunications equipment (for example modems) where these are used primarily for alarm transmission.

### 3.9

#### **alarm transmission system**

equipment and network used to transfer information concerned with the state of one or more alarm systems to one or more alarm receiving centres

### 3.10

#### **application**

all related facilities used for a specific purpose, such as the detection and warning in the event of fire, lighting control etc.

### 3.11

#### **application standard**

standard related to a specific application (such as referred in A.8)

### 3.12

#### **central control facility – CCF**

equipment used for control and/or indicating purposes in type 1 configuration, which is connected to one or more dedicated systems and which is normally manned by operating personnel, for example a computer at a supervised location. The CCF is an additional facility (and not the standard-required control and indicating equipment) for at least one of the applications

**3.13****combined and integrated alarm system**

in this document, the wording 'combined and integrated alarm system' is synonymous with 'integrated alarm system', which will mostly be used in the document

**3.14****common device**

a device which is shared by two or more applications

**3.15****common facility**

facility which is shared by two or more applications

NOTE A common facility may be additional for two or more applications, it may be standard-required for two or more applications or it may be additional for one or more applications and standard-required for other applications.

**3.16****common transmission path**

a transmission path used by several applications

**3.17****dedicated device**

a device used solely by one application

**3.18****dedicated system**

a system used for only one application type and fulfilling all the requirements applicable to that application

**3.19****dedicated transmission path**

a transmission path used solely within one application

**3.20****facility**

hardware or software which enable a system to fulfil one or more functions, for example a transmission path, a processing element, displays

**3.21****fault condition**

a condition of a system which prevents a system or part thereof from functioning normally

**3.22****fault signal**

a message generated due to the presence of a fault

**3.23****integrated alarm system**

a system having common facilities used for different applications with at least one being an alarm application

NOTE 1 The alarm transmission system is not considered as a part of an integrated alarm system.

NOTE 2 Dedicated systems only connected via a unidirectional output device without any data communications, for example relay, are not considered as being part of integrated alarm systems.

**3.24****integrity**

the ability of an application to function as designed and the measure of immunity from influences which could affect correct operation



**3.25****log book**

a record book or its electronic equivalent into which all relevant details of the system, its performance and its maintenance can be entered in a relatively secure manner for later retrieval by authorised organizations

**3.26****non-alarm application**

an application intended to provide control and not intended primarily for the protection of life, property or the environment, for example:

- heating and ventilating;
- energy management;
- building management;
- lighting.

**3.27****processing element**

facility to perform mathematical or logical operations on data according to programmed instructions in order to obtain the required functions

**3.28****standard-required facility**

facility which is described in an application standard and necessary to fulfil the function of that application standard

NOTE A standard-required facility may be shared by two or more applications. In this case this facility may be a standard-required facility for one application but additional for another application.

**3.29****tamper condition**

a condition of an alarm system in which tampering has been detected

**3.30****tamper detection**

the detection of deliberate interference with an alarm system or part thereof

**3.31****transmission path**

a communication route used to convey information within the integrated alarm system

**4 General description and fundamental principles****4.1 General**

Three configurations or types of integrated alarm systems are specified.

- Type 1 configuration is applicable for a combination and integration of dedicated standard alarm systems and dedicated non-alarm systems.
- Type 2A configuration is applicable for the combination and integration of standard alarm systems and non-alarm systems using common transmissions paths, common devices and common facilities. A single fault in one application has no adverse affect on any another alarm application. To achieve this redundancy is needed.
- Type 2B configuration is applicable for the combination and integration of standard alarm systems and non alarm systems using common transmissions paths, common devises and common facilities. A single fault in one application may have adverse affect in alarm applications.

## 4.2 Standards

For integrated alarm systems the standards relevant to each application shall apply.

Common facilities shall comply with all application standards for which they are standard-required. The most severe integrity requirement of each of the standards shall apply.

The common facilities not covered by the application standards shall meet the requirements of this Technical Specification.

Dedicated facilities have to comply with the relevant application standards (unless they are additional facilities).

## 4.3 Configuration types of integrated alarm systems

### 4.3.1 Type 1

A type 1 configuration is a combination of two or more dedicated systems. These dedicated systems are connected to common additional facilities, for example interconnected via additional transmission paths.

In a type 1 configuration the standard-required facilities in an alarm application, in any condition, shall not be adversely affected by any other dedicated system or any additional facilities in any operating condition.

Examples of such configurations are given on Figures 1, 2 and 3.

NOTE In the examples given in this clause, the dotted lines indicate those parts of each application, which comply with their application standard, if they exist.

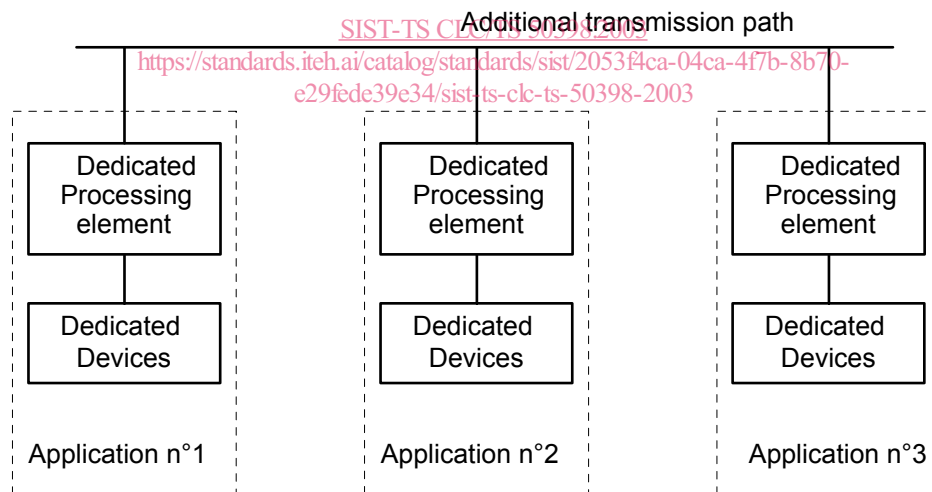
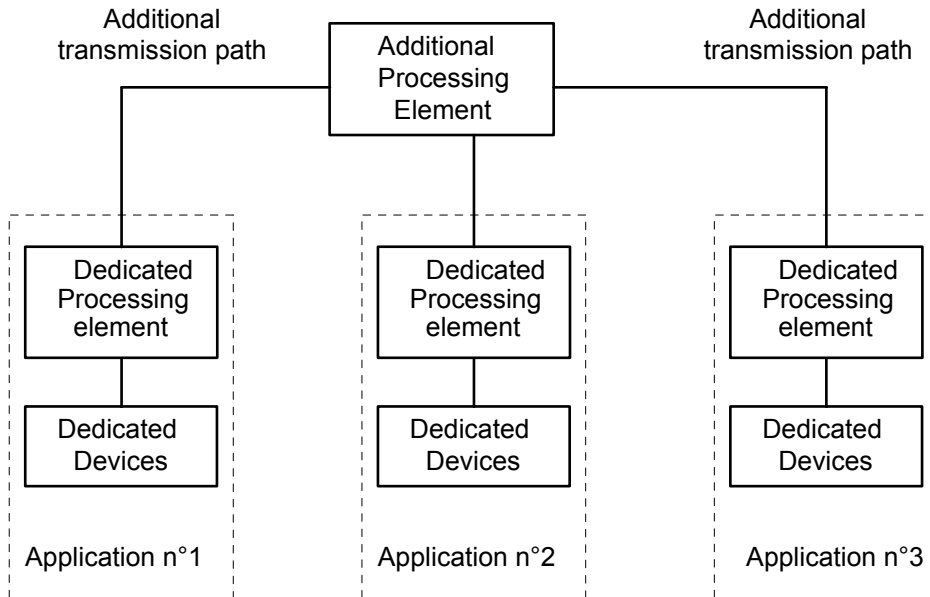
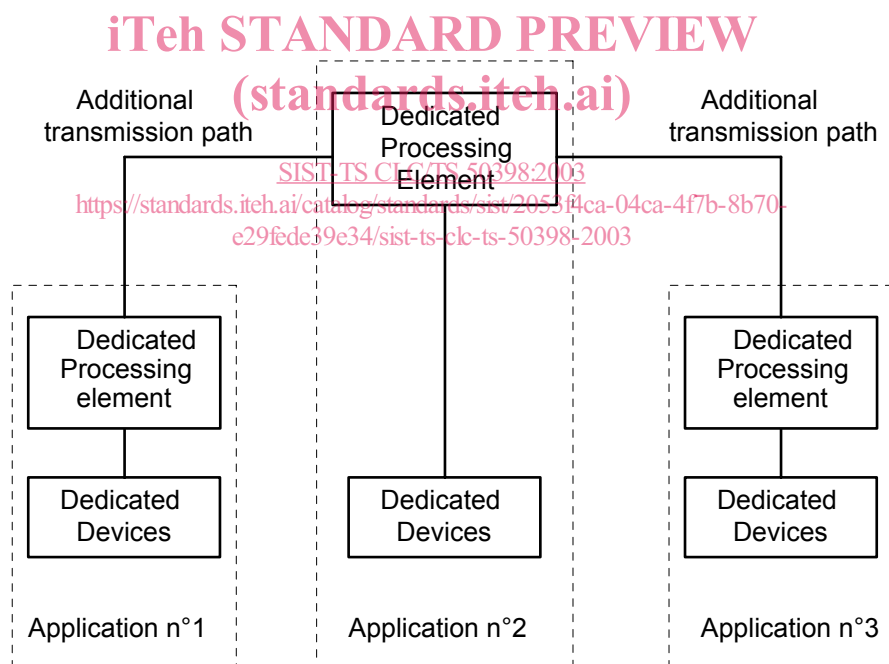


Figure 1 – First example of type 1 configuration



**Figure 2 – Second example of type 1 configuration  
Class 1 CCF**



**Figure 3 – Third example of type 1 configuration  
Class 2 CCF**